UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,719	07/12/2000	Seung-Hwan Bae	P-106	2342

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FLESHNER & KIM, LLP
14500 AVON PARKWAY
SUITE 125
CHANTILLY, VA 20151

EXAMINER
BONURA, TIMOTHY M

ART UNIT	PAPER NUMBER
2184	

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

   A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>12 July 2000</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,8,10 and 16</u> is/are rejected.

7)☒ Claim(s) <u>2-7,9,11-15 and 17-20</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>12 July 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other: .

DETAILED ACTION

Claim Objections

1.   The numbering of claims is not in accordance with 37 CFR 1.126 which requires the

original numbering of the claims to be preserved throughout the prosecution. When claims are

canceled, the remaining claims must not be renumbered. When new claims are presented, they

must be numbered consecutively beginning with the number next following the highest

numbered claims previously presented (whether entered or not). Please note that claims 6 and 7

are not number correctly. Appropriate action required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1, 8, 10, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by

Chung, et al, U.S. Patent Number 6,266,781. Regarding claim 1:

        a.   Regarding the limitation of "a first step of transmitting it own state information of

        either the first or the second processor to mutually another processor (twin) by using

        different transmission period to each other," Chung disclose a system with means to send

a heartbeat to a watchdog daemon running on each computer which supports failure

detection. (Lines 30-32 and 39-41 of Column 6).

b.   Regarding the limitation of "a second step of receiving the heartbeat applied from

the other processor and recognizing state information of the twin," Chung disclose a

system with means to receive a heartbeat from a processor being watched and to detect

functionality of the watched processor. (Lines 43-51 of Column 6).

c.   Regarding the limitation of "a third step of performing duplication states

according to the state information of the twin." Chung discloses a system with means to

replicate the process that is being processed by the primary processor to the secondary

processor. (Lines 54-59 of Column 6).

4.   Regarding claim 8, Chung discloses a system with means for a watchdog timer to

periodically send heartbeat messages to a super watchdog daemon. (Lines 11-12 of Column 7).

The super watchdog will receive the heartbeats for the watchdog and if the watchdog does not

send a heartbeat the super watchdog assumes the processor has failed. (Lines 12-16 of Column

7).

5.   Regarding claim 10:

d.   Regarding the limitation of "incoming heartbeat processing block for transmitting

it own state information of either the first or the second processor to mutually another

processor (twin) by using different transmission period to each other," Chung disclose a

system with means to send a heartbeat to a watchdog daemon running on each computer

which supports failure detection. (Lines 30-32 and 39-41 of Column 6).

e.   Regarding the limitation of "incoming heartbeat processing block for receiving the heartbeat from the other processor and recognizing state information of the twin," Chung disclose a system with means to receive a heartbeat from a processor being watched and to detect functionality of the watched processor. (Lines 43-51 of Column 6).

f.   Regarding the limitation of duplication FSM processing block for performing duplication states processing according to the state information of the twin." Chung discloses a system with means to replicate the process that is being processed by the primary processor to the secondary processor. (Lines 54-59 of Column 6).

6.   Regarding claim 16, Chung discloses a system with means to transmit heartbeats across a network (Lines 40-48 of Column 2), which can send the heartbeats at deferent intervals. (Lines 40-41 of Column 6). A periodic basis that Chung discloses is taken to mean: recurring or reappearing from time to time; intermittent. (From dictionary.com).

Allowable Subject Matter

7.   Claims 2-7, 9, 11-15, and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Tim Bonura.** The examiner can normally be reached on **Mon-**

Fri: 7:30-5:00, every other Friday off. The examiner can be reached at: **703-305-7762.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Rob Beausoliel** can be reached on **703-305-9713.** The fax phone numbers for the

organization where this application or proceeding is assigned are:
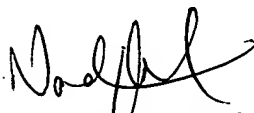
703-746-7239 for regular communications

703-746-7240 for After Final communications

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the **receptionist** whose telephone number is: **703-305-3900.**

Responses should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

NADEEM IQBAL
PRIMARY EXAMINER

Tim Bonura
Examiner
Art Unit 2184

tmb
September 26, 2003